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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/040,131	01/02/2002	James Larry Peacock	BEA920010037US1	8794
30011	7590	08/18/2004	EXAMINER	
LIEBERMAN & BRANDSDORFER, LLC 12221 MCDONALD CHAPEL DRIVE GAIITHERSBURG, MD 20878			AUVE, GLENN ALLEN	
			ART UNIT	PAPER NUMBER
			2111	

DATE MAILED: 08/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/040,131	PEACOCK, JAMES LARRY
Examiner	Art Unit	
Glenn A. Auve	2111	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
 THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### **Status**

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### **Disposition of Claims**

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-8,10-17,19 and 20 is/are rejected.
- 7) Claim(s) 9 and 18 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### **Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### **Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### **Attachment(s)**

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 4/15/2002.
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

**DETAILED ACTION*****Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10 is rejected because it is not clear what is meant by "tolerance of said sensor is self-adjusting." There does not appear to be an explanation of this terminology in the specification.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-8,11-17,19, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Klein et al., U.S. Pat. No. 6,138,194 (cited by applicant).

As per claim 1, Klein shows a sensor to detect motion of a computer module (fig.2, 210 or fig.4,406); and a switch to manage delivery of power to a connector holding said module, wherein initial motion of said module prior to disconnect from said connector activates said switch (also in figs. 2,4 and 6 and in col.4, line 59 – col.5, line 7 and col.6, lines 8-32, wherein when the sensors detect the beginning of removal of the card the switch is activated to remove power from the slot). Klein shows all of the elements recited in claim 1.

As for claim 2, the argument for claim 1 applies. Klein also shows a sensor actuator adapted to engage a shutter assembly actuator (in switch 406). Klein shows all of the elements recited in claim 2.

As for claim 3, the argument for claim 2 applies. Klein also shows a shutter assembly in communication with said shutter assembly actuator and said switch (in switch 406). Klein shows all of the elements recited in claim 3.

As for claim 4, the argument for claim 3 applies. Klein also shows that actuation of said sensor activates said shutter assembly actuator and vertically adjusts said shutter assembly to alter communication of said shutter assembly with said switch (in cols. 4-6 as noted above). Klein shows all of the elements recited in claim 4.

As for claim 5, the argument for claim 4 applies. Klein also shows that said switch sends a signal to a control circuit of said connector in response to movement of said shutter assembly (in cols. 4-6 as noted above). Klein shows all of the elements recited in claim 5.

As for claim 6, the argument for claim 5 applies. Klein also shows that said control circuit provides power to said connector when said shutter assembly is in communication with said switch (in cols. 4-6 as noted above). Klein shows all of the elements recited in claim 6.

As for claim 7, the argument for claim 5 applies. Klein also shows that said control circuit removes power from said connector when communication of said shutter assembly with said switch is removed (in cols. 4-6 as noted above). Klein shows all of the elements recited in claim 7.

As for claim 8, the argument for claim 1 applies. Klein also shows that said switch is selected from the group consisting of: an optical switch, a magnetic switch, and a mechanical switch, and combinations thereof (in cols. 4-6 as noted above). Klein shows all of the elements recited in claim 8.

As for claim 11, the argument for claim 2 applies. Klein also shows that said actuator is selected from the group consisting of: ratchet teeth, a pin, a spring, a magnet, an electromagnet, and combinations thereof (inherent in that the switch 406 must be attached to some sort of spring mechanism). Klein shows all of the elements recited in claim 11.

As per claim 12, Klein shows (a) detecting motion of a computer module through a sensor; and (b) disconnecting power from a connector holding said module upon motion of said module prior to disconnecting said module from said connector (at least in fig.6 and cols. 4-6 as noted above). Klein shows all of the steps recited in claim 12.

As for claim 13, the argument for claim 12 applies. Klein also shows that said sensor includes a shutter assembly in communication with a power switch of said connector (in switch 406). Klein shows all of the steps recited in claim 13.

As for claim 14, the argument for claim 13 applies. Klein also shows sending a signal to a control circuit of said connector in response to actuation of said sensor (cols. 4-6 as above). Klein shows all of the steps recited in claim 14.

As for claim 15, the argument for claim 14 applies. Klein also shows that the step of sending a signal to said control circuit includes providing power to said connector when said shutter assembly is in communication with said switch (cols. 4-6 as above). Klein shows all of the steps recited in claim 15.

As for claim 16, the argument for claim 14 applies. Klein also shows that the step of sending a signal to said control circuit includes disconnecting power from said connector when communication of said shutter assembly with said switch is removed (cols. 4-6 as above). Klein shows all of the steps recited in claim 16.

As for claim 17, the argument for claim 13 applies. Klein also shows that said switch is selected from the group consisting of: an optical switch, a magnetic switch, a mechanical switch,

and combinations thereof (figs. 2 and 4 and cols. 4-6). Klein shows all of the steps recited in claim 17.

As per claim 19, Klein shows a sensor to mechanically detect motion of a computer module; a switch to manage delivery of power to a connector holding said module, wherein initial motion of said module prior to disconnect from said connector activates said switch; a sensor actuator adapted to engage a shutter assembly actuator; and a shutter assembly in communication with said shutter assembly actuator and said switch to communicate motion of said module with said switch (all in fig. 4 and cols. 4-6 as noted above). Klein shows all of the elements recited in claim 19.

As for claim 20, the argument for claim 19 applies. Klein also shows that said actuator is selected from the group consisting of: ratchet teeth, a pin, a spring, a magnet, an electromagnet, and combinations thereof (inherent in that the switch 406 must be attached to some sort of spring mechanism). Klein shows all of the elements recited in claim 20.

#### ***Allowable Subject Matter***

5. Claims 9 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
6. The following is a statement of reasons for the indication of allowable subject matter: none of the prior art appears to show the sensor being calibrated in order to detect module motion of about .005". The nearest prior art seems to show that the pins of the connector are of varying lengths which allows power to be removed or applied with the difference in pin length being around 0.07". This is a full order of magnitude larger than the claimed amount of motion detection and detecting such a small amount of motion would not seem to have been obvious to

one of ordinary skill in the art. In fact it would appear that detecting such a small amount of motion would likely be undesirable since power would be removed from the card after the slightest bit of movement.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited references show other means for removing power from a slot when a card is to be removed.
8. Hart (U.S. Pat. No. 4,071,722) shows a switch on the card which is normally held in an off state but when the card is seated in the slots and the latch to hold the card in place is locked into place the switch is slid to the on position and power is applied to the card. On removal the latch is shifted such that the power switch is returned to the off position and power is removed before the card is unplugged
9. Kozyra et al. (U.S. Pat. No. 6,232,676 B1) shows a similar system with a switch that must be engaged in order for power to be applied to the card and the switch actuator is held in place by a set screw. In order to remove the card the switch must be deactivated and power is removed.
10. Sevier (U.S. Pat. No. 6,381,146) shows another latch mechanism in which a switch sensor on the card is activated when the latch is locked so that power is applied to the card and the switch is deactivated when the latch is placed in the unlocked position such that power is removed prior to unplugging the card.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Glenn A. Auve whose telephone number is (703) 305-9638. The examiner can normally be reached on M-Th 8:00 AM-5:30 PM, every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on (703) 305-4815. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Glenn A. Auve  
Primary Examiner  
Art Unit 2111

gaa  
August 16, 2004